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Envisioning Knowledge: Langer's Award-Winning Book Challenges Teachers to Rethink Thinking

"We are at a pivotal point in American education where we can view knowledge through a reductionist lens or an envisionment lens. An envisionment approach will better prepare students for the career and college readiness we're seeking."

—Judith A. Langer, Distinguished Professor
in the School of Education, University of Albany

During my interview with Judith A. Langer, recipient of the 2012 David H. Russell Award for Distinguished Research in the Teaching of English for her book *Envisioning Knowledge: Building Literacy in the Academic Disciplines* (Teachers College Press, 2011), I found myself incessantly nodding my head in agreement with her passionate vision for the classroom and beyond.

Langer's description of the ways in which experts in any discipline—English, math, science, history—create and convey knowledge is refreshingly realistic to those of us who take on the awesome responsibility of teaching students how to become active participants in their own learning.

Built on the notion that "content learning," attaining material constituting knowledge in a field, and "discourse learning," understanding the strategies and conventions through which members of a disciplinary community make and share knowledge, go "hand in hand," Langer stresses the centrality of both kinds of knowing to "deep learning."

More superficial kinds of knowledge acquisition, the mere banking up of information, are apt to lead to a "dead end," a point at which information has been stored up but productive thinking and further knowledge building cease.

Those of us who want to see our students become expert thinkers who engage in active thinking throughout their lives and drive knowledge forward will discover a wealth of ideas and strategies for the classroom inside the pages of Langer's winning book.

A Lifetime of Learning

Langer's latest publication is a culmination of more than thirty years of research aimed at unpacking the ways in which individuals learn, the processes by which we make meaning, and, just as importantly, how we "mark" these understandings.

In *Envisioning Knowledge*, Langer returns to the "stances" required for envisionment building described in her earlier book, *Envisioning Literature*. By introducing students to disciplinary material through a series of stances, teachers encourage learners to make the kinds of connections that relate new ideas to a larger network of knowing. In brief, students adopt stances that evolve from thinking about the knowledge they already possess about a subject to examining how new material contributes to this knowledge to comprehending and critically assessing the material. The final stance involves "going beyond the material" to create fresh connections, to be a contributor to the conversation as opposed to a passive receiver of others' ideas.

Applying envisionment building to a host of disciplines is the subject of *Envisioning Knowledge*, as this scholar-teacher shows us how to forge ahead by breaking with traditional ways of thinking that prevent us from imagining and producing learning environments that are exciting, dynamic, and immensely productive.

Envisioning Knowledge

While Langer's discussion of envisioning knowledge is appropriately multilayered, five key points emerge to convey an innovative model of teaching and learning that addresses the literacy needs of students in the twenty-first century.

Knowledge and Information Are Not the Same

Information gathering doesn't necessarily require an understanding of how these bits and pieces—facts, rules,

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or definitions, for instance—fit into a more complex body of meaning. Knowledge, on the other hand, reflects “connections between ideas, and the ability to think forward, participating in the creation of new knowledge,” Langer says.

Knowledge is “generative,” Langer adds, because students understand not only *what* physicists or historians know, but also *how* they know.

Langer advocates revealing the discourse communities that operate within every discipline so that students grasp the internal logic of a discipline. Such exposure teaches students what constitutes evidence, how arguments are organized and qualified, and what genres are employed for the sharing of ideas among members of a distinct discourse community.

It’s the kind of lesson in socialization that’s necessary if our students want to become knowledge creators in a particular field or innovative thinkers who recognize ideas that transfer from one field to another.

Envisionment classrooms are exciting places.

Envisionments Underlie Knowledge Development

To “think forward,” students must become aware of the processes by which they make connections between ideas. And, Langer notes, it’s the kind of meta-awareness that continues to develop long after students leave the classroom.

“We need to tap into the networks students bring with them,” Langer says. “As ideas come to any of us, we build them into our minds.”

Langer calls envisionments “meanings in motion,” referring to the processes by which we incorporate, reject, or modify new ideas to accommodate the networks we’ve already developed by the time we enter school. We can nurture students’ envisionments by encouraging them to work through the “turbulent and recursive” storing and reorganizing of ideas in established networks.

An example, in *Envisioning Knowledge* Langer describes an eighth-grade science class taught by Monica Judd in which students envision what might happen during an experiment and create a hypothesis based on prior knowledge (both directly experienced and theorized) before conducting the experiment. After collecting data, students are guided through a series of questions that help them to think through how their hypothesis was supported and/or proven wrong—tying explanations to specific evidence from the experiment as well as knowledge they have gained outside the classroom (*Envisioning Knowledge*, 80–88).

Reflection on the process of scientific inquiry that occurs *during the process itself* illustrates a way to capture “meanings in motion.”

Envisioning Knowledge Classrooms Are Exciting Places

“Minds-on teaching” is the term Langer uses to describe the kind of classroom where envisioning knowledge occurs. And, she adds, “they are exciting places!”

The educator’s role in this setting is to “focus on students’ envisionment building and then respond” accordingly. Langer’s book provides an example from Karen Polsinelli’s seventh-grade social studies class, in which students are required to “think like social scientists” by adopting “particular disciplinary lenses” (57) through which a culture can be examined.

Students from Polsinelli’s class consider evidence from a multitude of perspectives, including the political, economic, social, and geographic. In thinking through the evidence they have collected, students ask questions

that point to what kinds of data and arguments matter in various disciplines, and why considering these entry points in tandem is worthwhile. While documenting findings from an earlier time period or community, students are immersed in the process of meaning making, deepening their understanding of how we come to know and believe what we do about the past and present.

Knowledge Differs from Discipline to Discipline

While traditionally, we English teachers have been encouraged to teach students to read and write in ways that will carry them across disciplinary boundaries, Langer cautions us to rethink this simplification of how disciplines create meaning.

“Every discipline has its own built-up tradition for knowing and communicating,” Langer says. “How experts in a field use language, structure their ideas, or conceive a summary or report—it’s specific to that discourse community.”

In Jason Mutford’s 12th-grade geometry class, Langer writes, students take turns at the board mapping out math problems with the input of their classmates. Working collaboratively, students rely on the language and logic of geometry as well as their own networks of knowledge to communicate their thoughts effectively to the rest of the class. Mutford’s approach involves students in the problem-solving process, in contrast to traditional classes in which a proof is presented as the correct answer, but students are less involved in understanding how the proof is reached.



In *Envisioning Knowledge*, Langer describes how students can benefit by envisioning what might happen during an experiment, creating a hypothesis based on prior knowledge, and then responding to questions afterward about how their hypothesis was supported or disproven.

English Teachers Cannot (and Should Not) Do It All

Given the specific conventions of each discipline, Langer suggests that it is both unreasonable and impossible to expect English teachers to take on the task of introducing students to the culture of every disciplinary community.

Only a disciplinary specialist “can teach literacy in a field,” she asserts. Just as English teachers instruct students in the conventions of our discipline—reading and writing about literature, public discourse, and so on—experts in other subject areas must show students how to “read, write, speak, and know as they are engaged in learning the content of the discipline.”

What Langer calls “high literacy,” the “deep understanding” of *how* knowledge is created, is conceivable if educators across a spectrum of disciplines are willing to teach students how learning occurs in their area of expertise. This passing of the torch requires reframing how we currently think about disciplinary boundaries, however. Langer suggests that future teachers in the sciences, mathematics, history, as well as English, be taught how to teach content and conventions in tandem. Gradually, the inseparability of knowledge and knowledge-making will become an accepted paradigm and teachable practice in all academic subjects.

Seizing the Moment

As our conversation wound down, I asked Langer to address a concern that might be shared by many English teachers and other educators: How can classrooms centered on envisionment building thrive in a climate of state mandates that focus on core curriculum standards? How

can we help to broaden our students’ horizons rather than reduce their educational experiences to simplified notions of learning?

“We need to work within the current rhetoric,” Langer offered. “What we [politicians and citizens] want are students who display college and career readiness. We want a highly literate society, and that’s just what envisionment building creates.”

Langer’s advice for meeting real needs in a meaningful way comes at a crucial time.

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Readers interested in learning more about Langer’s work prior to *Envisioning Knowledge* might want to take a look at the following select titles:

Envisioning Literature: Literary Understanding and Literature Instruction. 2nd ed. Teachers College Press, 2011.

Getting to Excellent: How to Create Better Schools. Teachers College Press, 2004.

Effective Literacy Instruction: Building Successful Reading and Writing Programs. NCTE, 2002.

How Writing Shapes Thinking: A Study of Teaching and Learning. Co-authored with Arthur N. Applebee. NCTE, 1987.